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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,435	12/27/2001	Dennis J. Cox	066101.0316	1374

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BAKER BOTTS L.L.P.
PATENT DEPARTMENT
98 SAN JACINTO BLVD., SUITE 1500
AUSTIN, TX 78701-4039

EXAMINER	
BOAKYE, ALEXANDER O	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,435	COX ET AL.	
	Examiner	Art Unit	
	ALEXANDER BOAKYE	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 18-22* is/are rejected.

7)☒ Claim(s) *16-17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/12/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant is required to provide the serial number of co-pending application cited at page 4 of the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilford (US Patent # 6,687,247).

Regarding claim 1,Wilford teaches a system for providing a service to a packet based network, the service applying classifications that use arbitrary combinations of extracted packet header information, the system (column 17, lines 24-31) comprising: a processor having instructions to extract predetermined header information from a packet and further having instructions to perform table look-ups with the header information (column 17, lines 29-31; the claimed processor corresponds to Linecard processor, LCUP as evidenced by Wilford); a first data structure that provides a longest

match value for processor table look-ups (column 8, lines 1-5; column 20, lines 9-11; the claimed first data structure is contained in the look up memory 227 of Fig. 3); a second data structure that provides a first match value for processor table look-ups of combinations of longest match values, the first match value determining a classification for the packet (column 20, lines 9-11; the claimed second data structure is inherent in the look up memory 227 of Fig. 3).

Regarding claim 2, Wilford teaches a data structure modifier operable to dynamically update the tree data structure to create a new packet (column 8, lines 51-53).

Regarding claim 3, Wilford teaches that the new packet classification relies on the predetermined header information to avoid changes to the processor program (column 17, lines 55-66).

Regarding claim 4, Wilford teaches that the first data structure comprises a pattern tree (the claimed first data structure comprises a pattern tree is inherent in data structure of M-way branching tree structure as evidenced by Wilford).

Regarding claim 5, Wilford teaches that the second data structure comprises a ordered virtual tree (the claimed ordered virtual tree is inherent in data structure of M-way branching tree as evidenced by Wilford).

Regarding claim 6 , Wilford teaches that the processor instructions comprise a parse tree that extracts header field values (the claimed parse tree that extracts header field values is contained in the packet parser as evidenced by Wilford; column 19, lines 33-35).

Regarding claim 7, Wilford teaches that the parse tree comprises plural nodes and plural branches, the nodes representing packet fields and the branches representing values for the packet fields (column 20, lines 38-52).

Regarding claim 8, Wilford teaches that the leaf nodes of the parse tree comprise the table look-up instructions (column 20, lines 45-55).

Regarding claim 9, Wilford teaches that the header field values comprise destination address (header information used for routing include destination address which is well known to one of ordinary skill in the art).

Regarding claim 10, Wilford teaches that the header field values comprise one or more of Internet protocol source address and destination address (IP header as evidenced by Wilford includes one or more of Internet protocol source address and destination address).

Regarding claim 11, Wilford teaches that the processor comprises pattern processor (the claimed pattern processor is contained in the Linecard processor of Wilford).

Regarding claim 12, Wilford teaches a route/switch processor in communication with the pattern processor and operable to modify, shape and route the packet according to the classification (column 8, lines 51-53).

Regarding claim 13, Wilford teaches a method for classifying packets transmitted across a network, the method comprising: selecting predetermined packet field values from the packets (column 23, line 66- column 24, lines 1-2); classifying the packets by matching one or more packet field values with a data structure (column 20, lines 45-47);

and dynamically creating a new packet classification by modifying the data structure to associate one or more of the predetermined packet field values with the new packet classification (column 8, lines 51-56).

Regarding claim 14, Wilford teaches that selecting predetermined packet field values comprises extracting packet field values from packet headers with a pattern processor having a program (column 17, lines 55-60).

Regarding claim 15, Wilford teaches wherein dynamically creating a new packet classification further comprises modifying the data structure (column 8, lines 51-53) and leaving the pattern processor program fixed.

Regardind claim 18, Wilford teaches that the data structure comprises an ordered virtual tree (the claimed data structure comprises an ordered virtual tree is inherent in data structure of the M-way branching tree as evidenced by Wilford).

Regarding claim 19, Wilford teaches that the data structure comprise a pattern tree (the claimed data structure comprise a pattern tree in inherent in the data structure of M-way branching tree as evidenced by Wilford).

Regarding claim 20, Wilford teaches a system for classifying packets comprising: a network processor having programmably fixed instructions that select values from predetermined packet fields (column 17, lines 29-31; the claimed network processor corresponds to Linecard processor, LCUP as evidenced by Wilford); a data structure that associates one or more packet fields values with a classification (column 8, lines 1-7); and a data structure modifier interfaced with the data structure and operable to

modify the data structure to define one or more classifications, each classification associated with one or more packet field values (column 8, lines 51-56).

Regarding claim 21, Wilford teaches that the programmably fixed instructions comprise a parse tree having plural nodes (the claimed parse tree having a plural nodes is inherent in data structure of M-way branching tree structure of Wilford).

Regarding claim 22, Wilford teaches that the data structure comprises: a pattern tree that determines a longest match for a packet field (column 20, lines 9-11); and an ordered virtual tree that determines a first match for a combination of longest matches (column 20, lines 9-11; the claimed ordered virtual tree is inherent in the data structure of M-way branching tree structure of Wilford).

Allowable Subject Matter

3. Claims 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00PM.

Il f attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3183. The fax number is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Electronic Business Center numbers 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner
AB
02/23/06

ALPUS H. HSU
PRIMARY EXAMINER